

## CLAIMS

What is claimed is:

- 1 1. A method for policy-enabled, contract-based management of a network operational  
2 support system, comprising the steps of:
  - 3 requesting a policy view from one or more policy management systems that  
4 are logically separate from the operational support system, wherein the  
5 policy view comprises a set of required policies;
  - 6 receiving one or more executable policies from the policy management system  
7 capable of supporting the required policies of the requested policy view  
8 based on a contract that defines one or more criteria that the selected  
9 executable policies must satisfy; and
  - 10 implementing the requested policy view by executing the selected executable  
11 policies.
- 1 2. The method of Claim 1 wherein the operational support system comprises a set of  
2 native policies indigenous to the operational support system, and further comprising  
3 the step of identifying a behavioral exception when none of the native policies is  
4 capable of supporting the requested policy view.
- 1 3. The method of Claim 2 wherein the requesting step is carried out only in response to a  
2 behavioral exception in the operational support system.
- 1 4. The method of Claim 1 wherein the requesting step further comprises the step of  
2 inventorying the available policy views of the policy management system.

1       6. The method of Claim 5 wherein the contract comprises one or more pre-conditions,  
2           one or more post-conditions, one or more environmental requirements and one or more  
3           policy dependency rules.

1      7. The method of Claim 6 further comprising the step of causing the contract to apply the  
2            environmental requirements to the selected executable policies to enable the selected  
3            executable policies to run on the operational support system.

1       8. The method of Claim 6 further comprising the step of causing the contract to apply the  
2           policy dependency rules to two or more of the selected executable policies when the  
3           behaviors of the two or more selected executable policies are in conflict with one  
4           another.

1 9. The method of Claim 1 wherein the policy management system comprises a policy  
2 export engine, and the receiving step further comprises the step of importing the  
3 selected executable policies from the policy export engine.

1   10. A method for policy-enabled, contract-based management of an operational support  
2   system implemented by a policy kernel in the operational support system that is  
3   communicatively coupled to one or more policy management systems, comprising the  
4   steps of:

5                 requesting a policy view from one or more policy management systems,  
6                 wherein the policy view comprises a set of required policies;  
7                 receiving one or more executable policies from the policy management system  
8                 capable of supporting the required policies of the requested policy view  
9                 based on a contract that defines one or more criteria that the selected  
10                executable policies must satisfy; and  
11                 implementing the requested policy view by executing the selected executable  
12                policies.

1   11. The method of Claim 10 wherein the policy kernel comprises a set of native policies  
2   indigenous to the policy kernel, and further comprising the step of identifying a  
3   behavioral exception when none of the native policies is capable of supporting the  
4   requested policy view.

1   12. The method of Claim 11 wherein the requesting step is carried out only in response to  
2   a behavioral exception in the policy kernel.

1   13. The method of Claim 10 wherein the requesting step further comprises the step of  
2   inventorying the available policy views of the policy management system.

- 1 14. The method of Claim 10 wherein the policy kernel comprises one or more policy  
2 access points, and further comprising the step of enabling the policy access points to  
3 provide an interface between the policy kernel and the policy management system.
- 1 15. The method of Claim 14 further comprising the step of inventorying the available  
2 policy access points of the policy kernel.
- 1 16. The method of Claim 14 wherein the policy access point is associated with a particular  
2 policy management system among a plurality of policy management systems.
- 1 17. The method of Claim 14 further comprising the step of disabling the policy access  
2 point to terminate the interface between the policy kernel and the policy management  
3 system.
- 1 18. The method of Claim 10 wherein the policy management system comprises an  
2 external policy engine, further comprising the step of causing the policy view to  
3 initiate the contract for the selection and importation of the executable policies from  
4 the external policy engine.
- 1 19. The method of Claim 18 wherein the contract comprises one or more pre-conditions,  
2 one or more post-conditions, one or more environmental requirements and one or more  
3 policy dependency rules.

1   20. The method of Claim 19 further comprising the step of causing the contract to apply  
2       the environmental requirements to the selected executable policies to enable the  
3       selected executable policies to run on the policy kernel.

1   21. The method of Claim 19 further comprising the step of causing the contract to apply  
2       the policy dependency rules to two or more of the selected executable policies when  
3       the behaviors of the two or more selected executable policies are in conflict with one  
4       another.

1   22. The method of Claim 10 wherein the policy management system comprises a policy  
2       export engine, and the receiving step further comprises the step of importing the  
3       selected executable policies from the policy export engine.

- 1    23. A method for policy-enabled, contract-based management of an operational support  
2       system implemented by a policy kernel, wherein the policy kernel comprises one or  
3       more policy access points and each policy access point is associated with a particular  
4       policy management system, the method comprising the steps of:  
5                 inventorying the policy access points of the policy kernel;  
6                 inventorying one or more policy views from one or more of the policy  
7                 management systems, wherein the policy view comprises a set of  
8                 required policies;  
9                 requesting one of the policy views from the inventory of policy views;  
10          enabling the policy access point corresponding to the associated policy  
11                 management system capable of supporting the requested policy view;  
12          causing a contract of the requested policy view to be initiated for the selection  
13                 of executable policies from an external policy engine of the policy  
14                 management system;  
15          causing the contract to apply environmental requirements to the selected  
16                 executable policies to enable the selected executable policies to run on  
17                 the policy kernel;  
18          causing the contract to apply dependency rules to two or more of the selected  
19                 executable policies when the behaviors of the two or more selected  
20                 executable policies are in conflict with one another;  
21          importing the selected executable policies from a policy export engine of the  
22                 policy management system; and  
23          implementing the requested policy view by executing the selected executable  
24                 policies.

1   24. A computer-readable medium carrying one or more sequences of instructions for  
2         policy-enabled, contract-based management of a network operational support system,  
3         which instructions, when executed by one or more processors, cause the one or more  
4         processors to carry out the steps of:  
5             requesting a policy view from one or more policy management systems that  
6                 are logically separate from the operational support system, wherein the  
7                 policy view comprises a set of required policies;  
8             receiving one or more executable policies from the policy management system  
9                 capable of supporting the required policies of the requested policy view  
10                 based on a contract that defines one or more criteria that the selected  
11                 executable policies must satisfy; and  
12             implementing the requested policy view by executing the selected executable  
13                 policies.

- 1   25. A system for policy-enabled, contract-based management of operational support  
2       systems, comprising:  
3           means for requesting a policy view from one or more policy management  
4           systems that are logically separate from the operational support system,  
5           wherein the policy view comprises a set of required policies;  
6           means for receiving one or more executable policies from the policy  
7           management system capable of supporting the required policies of the  
8           requested policy view based on a contract that defines one or more  
9           criteria that the selected executable policies must satisfy; and  
10          means for implementing the requested policy view by executing the selected  
11           executable policies.
- 1   26. A system for policy-enabled, contract-based management of operational support  
2       systems, comprising:  
3           a policy kernel for executing policies of a policy view on the operational  
4           support system; and  
5           one or more policy access points that are communicatively coupled to one or  
6           more policy management systems, the policy management system  
7           including one or more executable policies and one or more policy views,  
8           the policy views containing a set of required policies and a contract that  
9           defines one or more criteria that the executable policies must satisfy.